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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,485	02/07/2006	Matthias Illing	022862-1071-00	8675
23409 7590 09/28/2007 MICHAEL BEST & FRIEDRICH LLP 100 E WISCONSIN AVENUE Suite 3300 MILWAUKEE, WI 53202			EXAMINER MILLER, SAMANTHA A	
			ART UNIT 3749	PAPER NUMBER
			MAIL DATE 09/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,485	Applicant(s) ILLING ET AL.	
	Examiner Samantha A. Miller	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/19/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Receipt of applicant's amendment filed on 7/11/2007 is acknowledged

The amendment filed 7/11/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Figure 3 element 10. The sensor 6 for detecting the hazardous gas concentration in the passenger compartment 1 communicates with its environment either with an analog or preferably digital LIN interfaces 10, which permits various operating modes of the sensor 6. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

Claim 10 is objected to because of the following informalities: "the sensor for detecting hazardous gas concentrations communicates with the control unit for the circulating air and/or intake air portion via an analog or a digital interface", is not supported by the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10-11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Chatterjee (6,471,136). Chatterjee teaches in the specification and Figs. 1-2 an invention in the same field of endeavor as applicant's invention that is described in the applicant's claims.

Chatterjee teaches:

1. To regulate a circulating air and/or intake air portion (60, 70) in a passenger compartment of a vehicle, in particular a motor vehicle (col.5 ll.1-8), with a sensor (10) for detecting hazardous gas concentrations in the passenger compartment and for supplying a triggering signal of a control unit (100) for the circulating air and/or intake air portion in a passenger compartment (col.4 ll.51-65), characterized in that the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature measured by the sensor for temperature compensation of the sensor for detecting the hazardous gas concentration is used to regulate the circulating air and/or intake air portion in the passenger compartment (col.7 ll.45-49 and col.4 ll.51-65).

2. The control unit (100) for the circulating air and/or intake air portion induces the supply of the passenger compartment in an alternating manner with either exclusively circulating air (col.5 ll.1-8) or exclusively intake air (60) as a function of

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exceeding or falling short of a hazardous gas concentration threshold value (col.4 ll.50-65).

3. The control unit (100) for the circulating air and/or intake air portion (60, 70) controls the size of the circulating air portion in the passenger compartment of the vehicle (col.4 l.50 –col.5 l.8).

4. The size of the circulating air portion in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment (col.4 ll.37-65).

5. The control unit (100) for the circulating air and/or intake air portion (60, 70) increases the circulating air portion in the passenger compartment when there is an increase in the outside temperature of the passenger compartment (being a control climate system with the option of a temperature sensor (30) as the temperature outside increases the indoor temperature will increase as well this will trigger the temperature sensor to change the signal to controller (100) that will send signal (9) to actuate the vent door (122), col.4 ll.50-65 and col.7 ll.45-50)

6. The control unit for the circulating air and/or intake air portion (60, 70) is a part of a cooling/heating device (82) (col.4 ll.26-32).

7. The sensor for detecting hazardous gas concentrations detects the carbon dioxide concentration in the passenger compartment (col.7 ll.45-50).

10. The sensor for detecting hazardous gas concentrations communicates with the control unit (100) for the circulating air and/or intake air portion (60, 70) via an

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analog or a digital interface (measures voltage signals through interface (40), col.4 ll.9-11 and 50-65).

11. A Sensor for regulating a circulating air and/or intake air portion (60, 70) in a passenger compartment of a motor vehicle, the sensor detecting hazardous gas concentrations in the passenger compartment and supplying a triggering signal (9) of a control unit (100) for the circulating air and/or intake air portion in the passenger compartment (122) (col.4 ll.50-65), characterized in that the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature (col.7 ll.45-60) measured by the sensor for temperature compensation of the sensor for detecting the hazardous gas concentration is used to regulate the circulating air and/or intake air portion in the passenger compartment, characterized in that the CO₂ concentration in the passenger compartment (col.7 ll.45-50) is measured by the sensor via a wavelength-specific weakening of electromagnetic radiation in the infrared range (CO₂ wavelength is in the infrared range which is then sensed by the biosensor with fiber optic probes, col.6 ll.10-23).

13. The sensor for detecting hazardous gas concentrations in the passenger compartment and the sensor for temperature compensation form a structural unit (Fig.1 and 2).

14. The control unit for the circulating air and/or intake air portion (60, 70) induces the supply of the passenger compartment in an alternating manner with either

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exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (col.4 ll.50-65).

15. The control unit for the circulating air and/or intake air portion controls the size of the circulating air portion in the passenger compartment of the vehicle (through control climate unit 82 and set value of controller, col.4 ll.26-32 and 50-65).

16. The size (set value) of the circulating air portion in the passenger compartment controlled by the control unit moves in a pre- definable range (in excess of set value) of a tolerable hazardous gas concentration in the passenger compartment (col.4 ll.50-65).

17. The control unit for the circulating air and/or intake air portion increases the circulating air portion in the passenger compartment when there is an increase in the outside temperature of the passenger compartment (being a control climate system with the option of a temperature sensor (30) as the temperature outside increases the indoor temperature will increase as well this will trigger the temperature sensor to change the signal to controller (100) that will send signal (9) to actuate the vent door (122), col.4 ll.50-65 and col.7 ll.45-50).

18. The control unit for the circulating air and/or intake air portion is a part of a cooling/heating device (82) (col.4 ll.26-32).

Claim Rejections - 35 USC § 103

Claims 8-9, 12, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjee in view of being optimum values.

These optimum values are taught in the following reference:

A. Dussault (5,261,415) teaches:

12. The carbon dioxide concentration is measured by the sensor at wavelengths between 4.2 μm and 4.3 μm (optimum range for CO.sub.2, col.2 ll.44-50) and a reference wavelength between 3.8 μm and 4.0 μm (reference wavelength determined to fit detector used being a optimum value, col.3 ll.10-20).

B. Wood (5,892,140) teaches:

8. The hazardous gas concentration threshold value in the passenger compartment is selected at 0.2% by volume CO₂ (taught as optimum value col.2 ll.13-16).

19. The hazardous gas concentration threshold value in the passenger compartment is selected at 0.2% by volume CO₂ (taught as optimum value col.2 ll.13-16).

C. Chatterjee teaches:

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9. The control unit for the circulating air and/or intake air portion adjusts the circulating air portion in the passenger compartment to approx. 80% when a person is located in the passenger compartment (optimum value that can be set by passenger, col.4 ll.26-32 and 50-65).

20. The control unit for the circulating air and/or intake air portion (V_s , V_o) adjusts the circulating air portion (V_s) in the passenger compartment to approx. 80% when a person is located in the passenger compartment (optimum value that can be set by passenger, col.4 ll.26-32 and 50-65).

D. Therefore, it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the sensor of Chatterjee to have these ranges or values (3.8 to 4 μm , 0.2% by volume, and approximate 80%) since where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, MPEP § 2144.05.

Response to Arguments

Applicant's arguments filed 7/11/2007 have been fully considered but they are not persuasive.

Applicant contends that CHATTERJEE does not disclose a different kinds of gas sensors. However, claims are afforded their broadest reasonable interpretation.

In this instant application, claims 1-20 merely require a sensor for detecting hazardous gas concentrations in the passenger compartment and for

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supplying a triggering signal of a control unit for the circulating air and/or intake air portion in a passenger compartment, characterized in that the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature measured by the sensor for temperature compensation of the sensor for detecting the hazardous gas concentration is used to regulate the circulating air and/or intake air portion in the passenger compartment. It should be readily apparent that sensor 10 (col.4 ll.51-65) controls the air circulating/intake. The sensor further is a temperature-compensated sensor as defined by applicant the sensor is a if in addition to the hazardous gas concentration measured by the sensor (col.4 ll.51-65), the temperature measured by the sensor for being capable to be temperature compensation of the sensor (col.7 ll.45-49).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory

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action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samantha A. Miller whose telephone number is 571-272-9967. The examiner can normally be reached on Monday - Thursday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Samantha Miller
Examiner
Art Unit 3749
9/19/2007



STEVE MCALLISTER
SUPERVISORY PATENT EXAMINER